

Remarks of Representative **Mark Udall** (D-CO)  
upon introduction of a  
**Resolution Recognizing the Hubble Space Telescope's Accomplishments and  
Recommending Reconsideration of Future Servicing Missions  
March 3, 2004**

Mr. Speaker, today I am introducing a resolution recognizing the accomplishments of the Hubble Space Telescope and recommending reconsideration of future servicing mission to Hubble. I am very pleased that a number of my colleagues are joining me as original cosponsors of this bill – including Reps. Bartlett, Hoyer, McDermott, Akin, Gordon, Lampson, and Ruppertsberger.

I wish this resolution weren't necessary. I am introducing it in response to NASA's decision made in mid-January to cancel all future space shuttle missions to the Hubble Space Telescope, including SM-4, the next flight that would have installed the new Cosmic Origins Spectrograph and the Wide Field Camera 3 instruments – both largely completed at a cost of about \$200 million. Installation of these instruments would have provided over a factor of ten improvement in Hubble's imaging and spectroscopy, and in addition to replacement gyros and batteries, would make Hubble's final years its most scientifically capable and productive. If SM-4 goes forward, Hubble will continue to operate until 2012. Without the mission, Hubble will likely die in orbit sometime in 2007.

My goal in introducing this resolution is simple – I want to call attention to the Hubble Space Telescope's contributions to scientific research and education and ensure that any decision affecting its future is made carefully and seriously and for the right reasons. Precisely because of Hubble's extraordinary contributions in the past and promised contributions in the future, I also believe it is important that the decision to cancel the planned servicing mission to Hubble is considered by an independent panel of experts.

Finally, I want to try to ensure that the planning for the servicing mission continues at least until the panel comes up with its recommendations and until NASA provides a timetable of compliance with recommendations of the *Columbia* Accident Investigation Board report, since NASA's compliance will allow both a Hubble servicing mission and a mission to the International Space Station to be carried out safely. Since NASA Administrator O'Keefe cited safety concerns as the main reason for the cancellation of the mission, it seems to me that NASA must state how and when it plans to comply with the CAIB recommendations. Once the shuttles are deemed safe enough to fly, a trip to Hubble will be as safe as a trip to the Station. Indeed, there are some who argue that the Hubble mission will be the safer of the two.

Hubble's scientific contributions continue to amaze us all, year in and year out. A few weeks ago Hubble detected oxygen and carbon in the atmosphere of a distant planet, the first time the elements have been found at a world outside our solar system. Hubble also contributed to the finding of new evidence about recently discovered "dark energy." Hubble measured properties of light from 16 exploding stars, or supernovas, to find that the dark energy that pervades the universe might be what Einstein originally called the "cosmological constant." This discovery supports the theory that instead of ripping apart, the cosmos will continue expanding very slowly for at least the next 30 billion years.

These are just recent discoveries. Hubble remains one of the most productive scientific instruments in history, and certainly NASA's most productive scientific mission, accounting for 35 percent of all its discoveries in the last 20 years. The Hubble has provided proof of black holes, insights into the birth and death of stars, spectacular views of Comet Shoemaker-Levy 9's collision

with Jupiter, the age of the universe, and evidence that the expansion of the universe is accelerating.

So to me – and to so many others who have voiced their opposition to NASA's decision – it seems as though canceling the mission is premature at best.

I would rather not cynically believe, as some do, that the Hubble is being abandoned primarily to enable the president's Moon-Mars initiative to get underway. But there doesn't seem to be any other explanation that makes sense.

I have long believed that NASA needs a new vision for the future – but before this Congress and future Congresses to commit to the president's expensive plan, NASA must first generate broad public support and scientific backing for it. Today, as the general public and the scientific community alike call for Hubble to be saved, NASA risks undermining its efforts to sell its Moon-Mars initiative to the public – not an auspicious beginning for a vision that will require billions and decades to complete.

I have attached a February 29<sup>th</sup> editorial from the *New York Times* calling for the administration to reconsider its decision. The final paragraph concludes, "The gains from extending Hubble's life are real and achievable and should not be sacrificed for a distant exploration program that for now is mostly wishful thinking and can surely be delayed a bit."

The gains from extending Hubble's life are indeed real and achievable. In addition to its past and potentially future scientific discoveries, Hubble provides information used by approximately one million teachers per year across the U.S. The demand for research time on the telescope far exceeds the time available. The scientific imagery and data Hubble provides is integral to the work of researchers in universities across the country and around the world.

Mr. Speaker, this resolution will be welcomed by school children, scientists, and interested citizens around the world who understand that Hubble is a national treasure that we should not prematurely condemn to death. I look forward to working with Members of the House, including my colleagues on the Science Committee, to move forward with this important initiative.

**New York Times**  
**February 29, 2004**  
Premature Death for the Hubble

By all accounts the Hubble Space Telescope is one of the most productive scientific instruments in history. Orbiting high above the distorting effects of Earth's atmosphere, it has peered far out into space and back toward the beginnings of time, producing images of startling clarity. It has detected extremely faint objects that can't be seen from the Earth, calibrated the age and expansion rate of the universe, detected supermassive black holes in the cores of galaxies and generally helped revolutionize our understanding of the universe. A distinguished panel of astronomers judged that Hubble "has arguably had a greater impact on astronomy than any instrument since the original astronomical telescope of Galileo."

Yet now, just as Hubble was scheduled for a major rejuvenation, the National Aeronautics and Space Administration has consigned it to slow death. The agency has canceled a planned servicing mission that would have upgraded Hubble's instruments and extended its life past the end of the decade, making it likely that the telescope will run out of battery power and functioning gyroscopes by about 2007. Congress needs to prevent the premature loss of this valuable instrument.

Cancellation of the servicing mission is being justified on safety grounds, but that is not the whole story. Indeed, it looks as if Hubble is being sacrificed primarily to make way for President Bush's grand new plans to send astronauts to the Moon and Mars in future years. Once the shuttles are deemed safe enough to resume flying, probably early next year, a shuttle flight to Hubble will be no more risky - and possibly even less risky - than flights to the space station. The real safety issue comes up if something goes wrong. A shuttle near the station might find safe haven and help in repairs. A shuttle near Hubble could not.

Our guess is that with NASA on high alert after the *Columbia* tragedy, the next shuttle flights will be the safest ever. Astronauts are paid to take risks, and there would be no shortage of volunteers for a Hubble mission that seems no more risky than other flights and a lot more important scientifically.

The Bush administration argues that Hubble has passed its prime, that its uniqueness is diminishing, that advances in ground-based telescopes enable them to do some of Hubble's work and that future breakthroughs will require telescopes able to search in other wavelengths than those used by Hubble. There is a germ of truth in all those contentions, but a parade of experts have argued that Hubble, if serviced and updated, has years of great work ahead. There seems little doubt that the science still to be done on Hubble is far more important than anything likely to be accomplished on the space station.

The chief reason for Hubble's demise is almost certainly NASA's need to use its shuttles to finish building the space station by 2010 so that the shuttles can be retired and the money used for the president's Moon-Mars exploration initiative. The agency will be lucky to complete the station on time even with all three remaining shuttles devoted to the task. Servicing the Hubble would be a diversion.

The administration essentially argues that the scientific returns from extending Hubble's life are not worth the risk and effort of a servicing flight. Our feeling is just the opposite. The gains from extending Hubble's life are real and achievable and should not be sacrificed for a distant exploration program that for now is mostly wishful thinking and can surely be delayed a bit.